

The ornithological collection of the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania – Part I: the catalogue of bird skin specimens

Gergely Osváth^{1,2}, Edgár Papp^{2,3}, Zoltán Benkő^{2,4}, Zsolt Kovács²

1 *Museum of Zoology, Babeş-Bolyai University, Cluj-Napoca, Romania* **2** *Evolutionary Ecology Group, Hungarian Department of Biology and Ecology, Babeş-Bolyai University, Cluj-Napoca, Romania* **3** *Milvus Group Bird and Nature Protection Association, Târgu Mureş, Romania* **4** *Romanian Ornithological Society/ BirdLife Romania, Cluj-Napoca, Romania*

Corresponding author: Gergely Osváth (osvathgergely@gmail.com)

Academic editor: George Sangster | Received 9 December 2021 | Accepted 14 April 2022 | Published 19 May 2022

<http://zoobank.org/C7F83179-399D-41AA-AE13-C4A0CD5DC23F>

Citation: Osváth G, Papp E, Benkő Z, Kovács Z (2022) The ornithological collection of the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania – Part 1: the catalogue of bird skin specimens. ZooKeys 1102: 83–106. <https://doi.org/10.3897/zookeys.1102.79102>

Abstract

This paper reviews the bird skin collection housed in the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania. The collection includes 925 specimens, belonging to 193 species from 53 families and 20 orders, collected between 1859 and 2021. Due to its historical background and the presence of rare species, it is considered to be one of most important ornithological collections in Eastern Europe. Such a collection can serve as a basis for valuable ornithological studies. Furthermore, a map representation with new distribution data for bird species is provided, which represents a source of information for the status of the avifauna of the Carpathian basin in the 19th and 20th centuries.

Keywords

Aves, biodiversity, bird skin, museum, ornithology, ornithological collections

Introduction

Museum collections are important primary data sources for addressing fundamental questions in morphology, systematics, biogeography and biodiversity conservation (Causey et al. 2004; Vágási et al. 2016; Bartoccioni 2017; Pap et al. 2017, 2019, 2020;

Osváth et al. 2018, 2020; Meineke et al. 2019). Collections generally comprise specimens from different time periods and areas; thus, well-labelled preserved specimens provide information on how the environment and species distribution has changed over extended time periods (Solow and Roberts 2006; MacLean et al. 2019; Gotelli et al. 2021). The importance of keeping specimens in collections and making them publicly available is increasing, particularly in the case of old collections, which cover long time periods (Roselaar 2003; Waeber et al. 2017; Mikula et al. 2018).

An important ornithological collection is held in the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania (Fig. 1). The collection is unique in the region in many ways: it covers a long time span, it contains a variety of species, belonging to different families and orders, and it is composed of the work of several naturalists and employees of the museum. Bird skins account for approximately half of the total



Figure 1. Bird skin specimens from the ornithological collection of the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania.

ornithological collection and they were only partially catalogued. Information about the collection had been published, particularly in the early stages of the museum’s history (e.g., Herman 1865, 1868, 1869; Apáthy 1910b, 1910a, 1911; Filipaşcu et al. 1965; Filipaşcu 1966), but the revision of the full collection had not been carried out and all specimen data had not been made public until now.

Hence, our aim was to systematically verify the species identification of the bird skin specimens in the Zoological Museum of Babeş-Bolyai University ornithological collection to provide a catalogue of these birds, including the following information: list of species, number of specimens per species, up to date taxonomic nomenclature, and collection data (date, location, collector).

Materials and methods

We examined each bird skin in the collection and the data cards documenting the identification, locality, date, sex and catalogue number. After this, we checked the species identification of specimens, and we determined the sex and age of birds, where possible. The scientific name and the taxonomy of birds was updated following Handbook of the Birds of the World and BirdLife International Taxonomic Checklist v. 5 (2020).

Some specimens lacked a data card but had old inventory numbers. Therefore, in order to maximise the information content of these specimens, we researched contemporary museum registers and early museum-related reports for data. Following identification, all available specimen data were entered into the updated digital catalogue of the bird skin collection. All collection locality information was georeferenced.

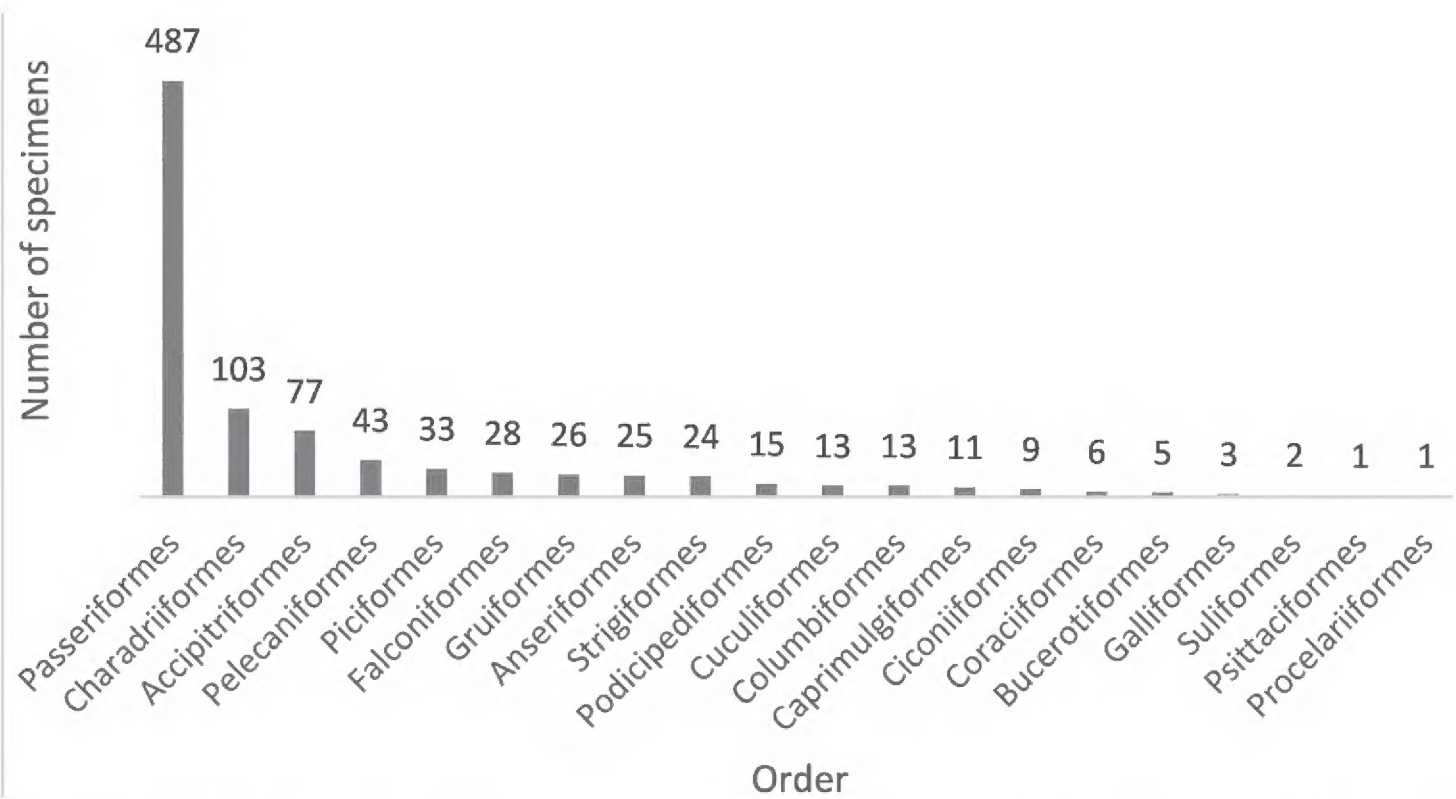


Figure 2. Total number of bird skin specimens per order represented in the ornithological collection of the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania.

Table 1. Bird skin specimens held by the Zoological Museum of Babeş-Bolyai University, Romania, including their updated identification and scientific name, locality of collection, name of collector (sur-name, given name), date of collection, and sex and age of birds. The full catalogue of bird skin collection is provided in the Suppl. material 1: Table S1. A blank cell indicates no available data.

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Zwörner Sándor	23.01.1904	M	adult	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	M	juvenile	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	M	adult	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	M	juvenile	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	F	adult	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	F	adult	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	F	adult	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	F	adult	Passeriformes
<i>Acanthis flammea</i>	Cluj-Napoca (CJ)	Korodi-Gál János	16.02.1973	M	adult	Passeriformes
<i>Accipiter gentilis</i>	Aghireş (CJ)	Führer Lajos	29.02.1906	M	adult	Accipitriformes
<i>Accipiter gentilis</i>	Miceşti (CJ)	Führer Lajos	03.10.1908	F	juvenile	Accipitriformes
<i>Accipiter gentilis</i>	Cluj-Napoca (CJ)	Führer Lajos	02.07.1905	M	juvenile	Accipitriformes
<i>Accipiter gentilis</i>	Turea (CJ)	Führer Lajos	26.08.1905	M	juvenile	Accipitriformes
<i>Accipiter gentilis</i>				M	adult	Accipitriformes
<i>Accipiter gentilis</i>				F	juvenile	Accipitriformes
<i>Accipiter gentilis</i>				M	juvenile	Accipitriformes
<i>Accipiter nisus</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	xx.08.1892	F	juvenile	Accipitriformes
<i>Accipiter nisus</i>	Turea (CJ)	Führer Lajos	26.08.1905	F	juvenile	Accipitriformes
<i>Accipiter nisus</i>	Turea (CJ)	Führer Lajos	15.07.1905	F	adult	Accipitriformes
<i>Accipiter nisus</i>		Zwörner Sándor	03.10.1903	M	juvenile	Accipitriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	F	adult	Passeriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	F	adult	Passeriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Passeriformes
<i>Acrocephalus arundinaceus</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	adult	Passeriformes
<i>Acrocephalus palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911		adult	Passeriformes
<i>Acrocephalus palustris</i>	Floreşti (CJ)	Führer Lajos	xx.05.1913	M	adult	Passeriformes
<i>Acrocephalus palustris</i>						Passeriformes
<i>Acrocephalus palustris</i>						Passeriformes
<i>Acrocephalus palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911			Passeriformes
<i>Acrocephalus palustris</i>						Passeriformes
<i>Acrocephalus</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>schoenabaenus</i>						
<i>Acrocephalus</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Passeriformes
<i>schoenabaenus</i>						
<i>Acrocephalus</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>schoenabaenus</i>			xx.xx.1911		adult	Passeriformes
<i>Acrocephalus</i>					adult	Passeriformes
<i>schoenabaenus</i>			xx.xx.1911			Passeriformes
<i>Acrocephalus</i>						Passeriformes
<i>schoenabaenus</i>						Passeriformes
<i>Acrocephalus scirpaceus</i>						Passeriformes
<i>Actitis hypoleucos</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.06.1911	M	juvenile	Charadriiformes
<i>Actitis hypoleucos</i>	Hortobágy (HU)		xx.04.1907	F		Charadriiformes
<i>Actitis hypoleucos</i>	Geaca (CJ)	Herman Ottó	xx.04.1867	F	adult	Charadriiformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Actitis hypoleucos</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	F	adult	Charadriiformes
<i>Actitis hypoleucos</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	F	adult	Charadriiformes
<i>Actitis hypoleucos</i>	Gilău (CJ)	Führer Lajos	xx.06.1911	F	juvenile	Charadriiformes
<i>Actitis hypoleucos</i>	Gilău (CJ)	Führer Lajos	xx.06.1911	M	adult	Charadriiformes
<i>Actitis hypoleucos</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Charadriiformes
<i>Actitis hypoleucos</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M	adult	Charadriiformes
<i>Actitis hypoleucos</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	F	adult	Charadriiformes
<i>Actitis hypoleucos</i>	Mociu (CJ)	Führer Lajos	xx.06.1910	M		Charadriiformes
<i>Actitis hypoleucos</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	M	juvenile	Charadriiformes
<i>Actitis hypoleucos</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Charadriiformes
<i>Actitis hypoleucos</i>	Szentgothárd (HU)	Ajtai K. Gyula	23.05.1910	M	adult	Charadriiformes
<i>Actitis hypoleucos</i>					adult	Charadriiformes
<i>Aegithalos caudatus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.01.1910	F	adult	Passeriformes
<i>Aegithalos caudatus</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	20.02.1910	M	adult	Passeriformes
<i>Aegithalos caudatus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M	adult	Passeriformes
<i>Aegithalos caudatus</i>	Cluj-Napoca (CJ)	Führer Lajos	21.12.1902	F	adult	Passeriformes
<i>Aegithalos caudatus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Aegithalos caudatus</i>	Miceşti (CJ)	Führer Lajos	xx.11.1909	F	adult	Passeriformes
<i>Aegithalos caudatus</i>	Miceşti (CJ)	Führer Lajos	xx.01.1909	M	adult	Passeriformes
<i>Aegithalos caudatus</i>					adult	Passeriformes
<i>Aegithalos caudatus</i>					adult	Passeriformes
<i>Aegithalos caudatus</i>					adult	Passeriformes
<i>Aegypius monachus</i>	Bucium (SJ)		24.06.1903	F	adult	Accipitriformes
<i>Alauda arvensis</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Alauda arvensis</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Alauda arvensis</i>	Cluj-Napoca (CJ)	Vincze Ferencz	14.03.1965	M	adult	Passeriformes
<i>Alauda arvensis</i>						Passeriformes
<i>Alauda arvensis</i>						Passeriformes
<i>Alcedo atthis</i>	Floreşti (CJ)	Führer Lajos	16.08.1912	M		Coraciiformes
<i>Anas acuta</i>	Ocna Mureş (AB)	Führer Lajos	17.03.1903	M	adult	Anseriformes
<i>Anas crecca</i>	Geaca (CJ)	Vincze Ferencz	30.09.1971	F		Anseriformes
<i>Anas crecca</i>	Geaca (CJ)	Vincze Ferencz	08.10.1971	M	juvenile	Anseriformes
<i>Anas crecca</i>	Geaca (CJ)	Vincze Ferencz	08.10.1971	F		Anseriformes
<i>Anas platyrhynchos</i>	Hăghig (CV)	Führer Lajos	11.01.1903	F		Anseriformes
<i>Anas platyrhynchos</i>				F		Anseriformes
<i>Anser albifrons</i>	Cefa (BH)	Vincze Ferencz	19.12.1970	F	juvenile	Anseriformes
<i>Anser albifrons</i>					juvenile	Anseriformes
<i>Anser fabalis</i>	Hortobágy (HU)	Teleky O.	xx.04.1907	F		Anseriformes
<i>Anser fabalis</i>						Anseriformes
<i>Anthus campestris</i>	Suatu (CJ)	Führer Lajos	xx.06.1911	M		Passeriformes
<i>Anthus cervinus</i>		Führer Lajos				Passeriformes
<i>Anthus spinoletta</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Anthus trivialis</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Anthus trivialis</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Anthus trivialis</i>	Cuzăplac (SJ)	Kómis Lajos	18.10.1913	M		Passeriformes
<i>Anthus trivialis</i>	Floreşti (CJ)	Führer Lajos	xx.03.1913			Passeriformes
<i>Anthus trivialis</i>						Passeriformes
<i>Aquila heliaca</i>	Sibiu (SB)	Führer Lajos	xx.08.1907	F	adult	Accipitriformes
<i>Aquila heliaca</i>	Sibiu (SB)	Führer Lajos	xx.08.1907	M	juvenile	Accipitriformes
<i>Ardea alba</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M		Pelecaniformes
<i>Ardea alba</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	F		Pelecaniformes
<i>Ardea cinerea</i>	Băgara (CJ)	Führer Lajos	xx.04.1910	F	adult	Pelecaniformes
<i>Ardea cinerea</i>	Cefa (BH)	Vincze Ferencz	23.06.1970	M	adult	Pelecaniformes
<i>Ardea cinerea</i>	Cefa (BH)	Vincze Ferencz	23.06.1970	M	adult	Pelecaniformes
<i>Ardea cinerea</i>	Cefa (BH)	Vincze Ferencz	23.06.1970	M	adult	Pelecaniformes
<i>Ardea cinerea</i>	Cefa (BH)	Vincze Ferencz	23.06.1970	F	juvenile	Pelecaniformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Ardea cinerea</i>	Cefa (BH)	Vincze Ferencz	23.06.1970	F	juvenile	Pelecaniformes
<i>Ardea cinerea</i>	Mociu (CJ)	Führer Lajos	xx.04.1910	M	adult	Pelecaniformes
<i>Ardea cinerea</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	F	juvenile	Pelecaniformes
<i>Ardea cinerea</i>	Țaga (CJ)	Ajtai K. Gyula	03.05.1910	F	immatur	Pelecaniformes
<i>Ardea cinerea</i>			xx.xx.1911		adult	Pelecaniformes
<i>Ardea cinerea</i>			xx.xx.1911		adult	Pelecaniformes
<i>Ardea cinerea</i>			xx.xx.1911		adult	Pelecaniformes
<i>Ardea cinerea</i>			xx.xx.1911		adult	Pelecaniformes
<i>Ardea purpurea</i>	Băgara (CJ)	Führer Lajos	xx.04.1910	F	adult	Pelecaniformes
<i>Ardea purpurea</i>	Geaca (CJ)	Vincze Ferencz	15.09.1972	F	juvenile	Pelecaniformes
<i>Ardea purpurea</i>	Geaca (CJ)	Führer Lajos	xx.xx.1911		adult	Pelecaniformes
<i>Ardea purpurea</i>					juvenile	Pelecaniformes
<i>Ardeola ralloides</i>	Cefa (BH)	Vincze Ferencz	24.06.1970	M	adult	Pelecaniformes
<i>Asio flammeus</i>	Apahida (CJ)	Führer Lajos	xx.03.1911	F	adult	Strigiformes
<i>Asio flammeus</i>	Borș (BH)	Führer Lajos	15.01.1906	F	adult	Strigiformes
<i>Asio flammeus</i>	Borș (BH)	Führer Lajos	15.01.1906	M	adult	Strigiformes
<i>Asio flammeus</i>	Cluj-Napoca (CJ)	Kómis Lajos	30.11.1913	F	adult	Strigiformes
<i>Asio flammeus</i>					adult	Strigiformes
<i>Asio flammeus</i>				M	adult	Strigiformes
<i>Asio flammeus</i>				F	adult	Strigiformes
<i>Asio flammeus</i>				F	adult	Strigiformes
<i>Asio flammeus</i>					adult	Strigiformes
<i>Asio flammeus</i>					adult	Strigiformes
<i>Asio flammeus</i>				F	adult	Strigiformes
<i>Asio otus</i>	Baia Mare (MM)	Sitar Cristian	xx.12.2010		adult	Strigiformes
<i>Asio otus</i>	Cefa (BH)	Vincze Ferencz	19.12.1970	F	adult	Strigiformes
<i>Asio otus</i>	Hortobágy (HU)	Nagy Jenő	xx.04.1907	M	adult	Strigiformes
<i>Asio otus</i>	Przewtoka (UA)	Kómis Lajos	06.04.1916	M	adult	Strigiformes
<i>Asio otus</i>	Turda (CJ)		xx.04.1893		adult	Strigiformes
<i>Asio otus</i>					adult	Strigiformes
<i>Athene noctua</i>		Führer Lajos	xx.xx.1911		adult	Strigiformes
<i>Athene noctua</i>	Sărmășel - Gară (MS)	Osváth Gergely	14.05.2020		adult	Strigiformes
<i>Aythya ferina</i>	Cefa (BH)	Vincze Ferencz	24.06.1970	F	juvenile	Anseriformes
<i>Aythya ferina</i>	Geaca (CJ)	Vincze Ferencz	04.06.1970	M	adult	Anseriformes
<i>Aythya nyroca</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F		Anseriformes
<i>Aythya nyroca</i>	Cefa (BH)	Vincze Ferencz	24.06.1970	F		Anseriformes
<i>Aythya nyroca</i>	Geaca (CJ)	Vincze Ferencz	03.06.1970	F		Anseriformes
<i>Aythya nyroca</i>	Geaca (CJ)	Vincze Ferencz	30.09.1971	F		Anseriformes
<i>Aythya nyroca</i>	Geaca (CJ)	Vincze Ferencz	03.06.1970	F	adult	Anseriformes
<i>Aythya nyroca</i>					adult	Anseriformes
<i>Bombycilla garrulus</i>	Cluj-Napoca (CJ)	Zwörner Sándor	18.12.1903	M		Passeriformes
<i>Bombycilla garrulus</i>	Cluj-Napoca (CJ)	Führer Lajos	10.11.1903	M		Passeriformes
<i>Bombycilla garrulus</i>	Cluj-Napoca (CJ)	Führer Lajos	10.11.1903	M		Passeriformes
<i>Bombycilla garrulus</i>	Cluj-Napoca (CJ)	Führer Lajos	10.11.1903	F		Passeriformes
<i>Bombycilla garrulus</i>				M		Passeriformes
<i>Bombycilla garrulus</i>				M		Passeriformes
<i>Bombycilla garrulus</i>				M		Passeriformes
<i>Bombycilla garrulus</i>				M		Passeriformes
<i>Bombycilla garrulus</i>				M		Passeriformes
<i>Bombycilla garrulus</i>				M		Passeriformes
<i>Buteo buteo</i>	Apahida (CJ)	Führer Lajos	xx.07.1912	F		Accipitriformes
<i>Buteo buteo</i>	Apahida (CJ)	Führer Lajos	xx.07.1912	M		Accipitriformes
<i>Buteo buteo</i>	Ardeal		xx.12.1863	M		Accipitriformes
<i>Buteo buteo</i>	Borșa (CJ)	Führer Lajos	29.03.1906	M		Accipitriformes
<i>Buteo buteo</i>	Cluj-Napoca (CJ)	Fülöp Herman	25.02.1960	M		Accipitriformes
<i>Buteo buteo</i>	Cluj-Napoca (CJ)		xx.02.1913	M		Accipitriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Buteo buteo</i>	Cluj-Napoca (CJ)	Führer Lajos	19.07.1905	M		Accipitriformes
<i>Buteo buteo</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	11.10.1909	F		Accipitriformes
<i>Buteo buteo</i>	Cristian (BV)	Lánczy I.	25.01.1903	F		Accipitriformes
<i>Buteo buteo</i>	Dej (CJ)	Zwörner Sándor	08.01.1904			Accipitriformes
<i>Buteo buteo</i>	Făgăraş (BV)	Zwörner Sándor	01.05.1903	M		Accipitriformes
<i>Buteo buteo</i>	Floreşti (CJ)		xx.xx.1913	F		Accipitriformes
<i>Buteo buteo</i>	Floreşti (CJ)	Führer Lajos	xx.10.1913	M		Accipitriformes
<i>Buteo buteo</i>	Grădina Zoologică din Târgu Mureş	Bereczki Boldizsár	15.02.1985			Accipitriformes
<i>Buteo buteo</i>	Grădina Zoologică din Târgu Mureş	Bereczki Boldizsár	15.02.1985			Accipitriformes
<i>Buteo buteo</i>	Miskolc (HU)	Herman Ottó?	xx.12.1863	F		Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>		Fülöp Herman				Accipitriformes
<i>Buteo buteo</i>						Accipitriformes
<i>Buteo buteo</i>	Delniţa (CJ)	Miklós Réka, Osváth Gergely	12.10.2020		immatur	Accipitriformes
<i>Buteo lagopus</i>	Apahida (CJ)		xx.02.1913	F	adult	Accipitriformes
<i>Buteo lagopus</i>	Cluj-Napoca (CJ)	Führer Lajos	07.02.1905	F	adult	Accipitriformes
<i>Buteo lagopus</i>	Cluj-Napoca (CJ)	Herman Ottó?	xx.xx.1865	M	adult	Accipitriformes
<i>Buteo lagopus</i>				M	adult	Accipitriformes
<i>Buteo lagopus</i>				F?	adult	Accipitriformes
<i>Buteo lagopus</i>				F	adult	Accipitriformes
<i>Buteo rufinus</i>	Europa de Sud-Est			M		Accipitriformes
<i>Buteo rufinus</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M		Accipitriformes
<i>Calidris minuta</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M	adult	Charadriiformes
<i>Calidris minuta</i>					adult	Charadriiformes
<i>Calidris minuta</i>	Someşeni (CJ)	Führer Lajos	xx.05.1911	M	adult	Charadriiformes
<i>Calidris pugnax</i>	Cătina (CJ)	Zwörner Sándor	11.05.1904	F	adult	Charadriiformes
<i>Calidris pugnax</i>	Hortobágy (HU)	Nagy Jenő	xx.04.1907	F	adult	Charadriiformes
<i>Calidris pugnax</i>				M	adult	Charadriiformes
<i>Caprimulgus europaeus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M		Caprimulgiformes
<i>Caprimulgus europaeus</i>	Cluj-Napoca (CJ)	Führer Lajos	10.10.1912	F		Caprimulgiformes
<i>Caprimulgus europaeus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M		Caprimulgiformes
<i>Caprimulgus europaeus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M		Caprimulgiformes
<i>Caprimulgus europaeus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M		Caprimulgiformes
<i>Caprimulgus europaeus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	F		Caprimulgiformes
<i>Caprimulgus europaeus</i>	Floreşti (CJ)	Vincze Ferencz	18.05.1970	F		Caprimulgiformes
<i>Caprimulgus europaeus</i>						Caprimulgiformes
<i>Caprimulgus europaeus</i>						Caprimulgiformes
<i>Caprimulgus europaeus</i>						Caprimulgiformes
<i>Carduelis carduelis</i>	Pădureni (CJ)	Vincze Ferencz	02.02.1985		adult	Passeriformes
<i>Certhia familiaris</i>	Cuzăplac (SJ)	Kómis Lajos	xx.04.1912	F		Passeriformes
<i>Certhia familiaris</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Certhia familiaris</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Certhia familiaris</i>						Passeriformes
<i>Certhia familiaris</i>						Passeriformes
<i>Charadrius alexandrinus</i>	Hortobágy (HU)	Teleki I.	xx.04.1907	F		Charadriiformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Charadrius dubius</i>	Cluj-Napoca (CJ)	Zwörner Sándor	15.04.1904	F		Charadriiformes
<i>Charadrius dubius</i>	Floreşti (CJ)	Führer Lajos	xx.04.1913	M		Charadriiformes
<i>Charadrius dubius</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911	F		Charadriiformes
<i>Charadrius dubius</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911	M		Charadriiformes
<i>Charadrius dubius</i>	Cluj-Napoca (CJ)	Zwörner Sándor	18.04.1904	M		Charadriiformes
<i>Chlidonias hybrida</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Charadriiformes
<i>Chlidonias hybrida</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Charadriiformes
<i>Chlidonias hybrida</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	adult	Charadriiformes
<i>Chlidonias hybrida</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M	adult	Charadriiformes
<i>Chlidonias hybrida</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F	adult	Charadriiformes
<i>Chlidonias niger</i>					juvenile	Charadriiformes
<i>Chlidonias niger</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	adult	Charadriiformes
<i>Chlidonias niger</i>	Braşov (BV)	Zwörner Sándor	08.07.1903	M	adult	Charadriiformes
<i>Chlidonias niger</i>	Geaca (CJ)	Vincze Ferencz	30.08.1971	F	juvenile	Charadriiformes
<i>Chloris chloris</i>	Cluj-Napoca (CJ)		04.03.1985	M	adult	Passeriformes
<i>Chloris chloris</i>	Cuzăplac (SJ)	Kómis Lajos	16.10.1913	F	adult	Passeriformes
<i>Chloris chloris</i>				F	adult	Passeriformes
<i>Chloris chloris</i>				F	adult	Passeriformes
<i>Ciconia ciconia</i>	Dezmir (CJ)	Fülöp Herman	18.08.1958	F	juvenile	Ciconiiformes
<i>Ciconia ciconia</i>	Grădina Zoologică din Turda	Vincze Ferencz	10.11.1971	M	adult	Ciconiiformes
<i>Ciconia ciconia</i>	Someşeni (CJ)	Vincze Ferencz	10.10.1972	M	adult	Ciconiiformes
<i>Ciconia ciconia</i>			xx.xx.1911		adult	Ciconiiformes
<i>Ciconia ciconia</i>			xx.xx.1911		adult	Ciconiiformes
<i>Ciconia ciconia</i>					adult	Ciconiiformes
<i>Ciconia nigra</i>	Râscruci (CJ)	Führer Lajos	xx.10.1909	F	juvenile	Ciconiiformes
<i>Ciconia nigra</i>				F	juvenile	Ciconiiformes
<i>Ciconia nigra</i>		Führer Lajos	xx.xx.1911	M	adult	Ciconiiformes
<i>Cinclus cinclus</i>	Bradu (NT)	Vincze Ferencz	10.05.1971	F		Passeriformes
<i>Cinclus cinclus</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	18.11.1909	M		Passeriformes
<i>Cinclus cinclus</i>	Someşul rece (CJ)	Vincze Ferencz	06.09.1970	M	juvenile	Passeriformes
<i>Cinclus cinclus</i>			xx.xx.1912			Passeriformes
<i>Cinclus cinclus</i>			xx.xx.1912			Passeriformes
<i>Cinclus cinclus</i>			xx.xx.1912			Passeriformes
<i>Cinclus cinclus</i>						Passeriformes
<i>Cinclus cinclus</i>	Mara (MM)	Deák József	10.08.1961			Passeriformes
<i>Circetus gallicus</i>	Sibiu (SB)	Führer Lajos	xx.07.1907	M		Accipitriformes
<i>Circus aeruginosus</i>	Floreşti (CJ)	Führer Lajos	xx.xx.1911	M	juvenile	Accipitriformes
<i>Circus aeruginosus</i>	Hăghig (CV)	Führer Lajos	01.05.1903	F	adult	Accipitriformes
<i>Circus cyaneus</i>				F	adult	Accipitriformes
<i>Clanga clanga</i>	Bonţida (CJ)	Führer Lajos	xx.02.1910	F	juvenile	Accipitriformes
<i>Clanga clanga</i>	Bonţida (CJ)	Führer Lajos	xx.02.1910	M?	juvenile	Accipitriformes
<i>Clanga clanga</i>	Gilău (CJ)	Führer Lajos	23.03.1896	F		Accipitriformes
<i>Clanga pomarina</i>	Apahida (CJ)	Führer Lajos	xx.04.1911	F		Accipitriformes
<i>Clanga pomarina</i>	Cuzăplac (SJ)	Führer Lajos	20.01.1914	F	juvenile	Accipitriformes
<i>Clanga pomarina</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	F		Accipitriformes
<i>Clanga pomarina</i>					adult	Accipitriformes
<i>Clanga pomarina</i>					adult	Accipitriformes
<i>Clanga pomarina</i>					adult	Accipitriformes
<i>Coccothraustes coccothraustes</i>	Someşeni (CJ)		12.09.1972	M		Passeriformes
<i>Columba oenas</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.06.1911	F	adult	Columbiformes
<i>Columba oenas</i>	Cordoş (MS)	Führer Lajos	xx.07.1911	M	adult	Columbiformes
<i>Columba oenas</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M	adult	Columbiformes
<i>Columba oenas</i>					adult	Columbiformes
<i>Columba oenas</i>					adult	Columbiformes
<i>Columba oenas</i>		Führer Lajos	xx.xx.1911		adult	Columbiformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Coracias garrulus</i>	Bicaz (NT)	Führer Lajos	xx.07.1910	F		Coraciiformes
<i>Corvus cornix</i>	Someşeni (CJ)	Neuwirth János	24.03.1903	M		Passeriformes
<i>Corvus frugilegus</i>						Passeriformes
<i>Corvus frugilegus</i>						Passeriformes
<i>Corvus monedula</i>	Cluj-Napoca (CJ)	Zwörner Sándor	02.02.1904	M	adult	Passeriformes
<i>Corvus monedula</i>	Cluj-Napoca (CJ)	Zwörner Sándor	19.11.1903	F		Passeriformes
<i>Corvus monedula</i>	Turea (CJ)	Führer Lajos	23.08.1903	M	adult	Passeriformes
<i>Corvus monedula</i>				M		Passeriformes
<i>Coturnix coturnix</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	juvenile	Galliformes
<i>Coturnix coturnix</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	M		Galliformes
<i>Crex crex</i>	Apahida (CJ)	Zwörner Sándor	05.06.1903	F		Gruiformes
<i>Crex crex</i>	Cluj-Napoca (CJ)		05.09.1902	M		Gruiformes
<i>Crex crex</i>	Geaca (CJ)	Herman Ottó	xx.04.1867	M	adult	Gruiformes
<i>Cuculus canorus</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Ceahlău (NT)	Vincze Ferencz	08.05.1971	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Cluj-Napoca (CJ)	Vincze Ferencz	25.09.1971	F	juvenile	Cuculiformes
<i>Cuculus canorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1912	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.xx.1912	M	juvenile	Cuculiformes
<i>Cuculus canorus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	F	adult	Cuculiformes
<i>Cuculus canorus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Pănade (AB)	Führer Lajos	xx.09.1909	M	adult	Cuculiformes
<i>Cuculus canorus</i>	Turnu Roşu (SB)	Ajtai K. Gyula	12.04.1910	M	adult	Cuculiformes
<i>Cyanistes caeruleus</i>	Cluj-Napoca (CJ)	Führer Lajos	18.11.1913	M		Passeriformes
<i>Cyanistes caeruleus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M		Passeriformes
<i>Cyanistes caeruleus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.03.1910	M		Passeriformes
<i>Cyanistes caeruleus</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	11.02.1910	M		Passeriformes
<i>Cyanistes caeruleus</i>	Floreşti (CJ)	Neuwirth János	26.03.1903	M		Passeriformes
<i>Cyanistes caeruleus</i>	Miceşti (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Cyanistes caeruleus</i>						Passeriformes
<i>Cyanistes caeruleus</i>						Passeriformes
<i>Cyanistes caeruleus</i>						Passeriformes
<i>Delichon urbicum</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Delichon urbicum</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Delichon urbicum</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Dendrocopos leucotos</i>	Almaşu (SJ)	Kómis Lajos	15.01.1914	M	adult	Piciformes
<i>Dendrocopos major</i>	Cluj-Napoca (CJ)	Zwörner Sándor	14.02.1903	F	adult	Piciformes
<i>Dendrocopos major</i>	Plesca (SJ)	Führer Lajos	26.03.1903	F	adult	Piciformes
<i>Dendrocopos major</i>				M	adult	Piciformes
<i>Dendrocopos major</i>				F	adult	Piciformes
<i>Dendrocopos major</i>	Alba Iulia (AB)	Savu George, Osváth Gergely	23.02.2018	M	adult	Piciformes
<i>Dryobates minor</i>	Feleacu (CJ)	Führer Lajos	xx.04.1909	M		Piciformes
<i>Dryobates minor</i>	Feleacu (CJ)	Führer Lajos	xx.04.1909	M		Piciformes
<i>Dryocopus martius</i>	Colibiţa (BN)	Vincze Ferencz	06.05.1971	M		Piciformes
<i>Dryocopus martius</i>	Măguri-Răcăţu (CJ)	Vincze Ferencz	03.08.1970	F		Piciformes
<i>Dryocopus martius</i>						Piciformes
<i>Egretta garzetta</i>	Cefa (BH)	Vincze Ferencz	26.07.1970	M		Pelecaniformes
<i>Egretta garzetta</i>	Cefa (BH)	Vincze Ferencz	23.06.1970	m		Pelecaniformes
<i>Emberiza citrinella</i>	Cluj-Napoca (CJ)	Fülöp Herman	31.01.1960	M		Passeriformes
<i>Emberiza citrinella</i>	Someşeni (CJ)	Vincze Ferencz	25.11.1972	M		Passeriformes
<i>Emberiza citrinella</i>						Passeriformes
<i>Emberiza citrinella</i>					immatur	Passeriformes
<i>Emberiza citrinella</i>				M?	immatur	Passeriformes
<i>Eremophila alpestris</i>	Floreşti (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Eremophila alpestris</i>	Floreşti (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Erithacus rubecula</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.08.1905	M		Passeriformes
<i>Erithacus rubecula</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Erithacus rubecula</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Erithacus rubecula</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Erithacus rubecula</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M		Passeriformes
<i>Erithacus rubecula</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M		Passeriformes
<i>Erithacus rubecula</i>	Făget (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Erithacus rubecula</i>	Floreşti (CJ)	Führer Lajos	xx.03.1913	M		Passeriformes
<i>Erithacus rubecula</i>			xx.10.1910	F		Passeriformes
<i>Erithacus rubecula</i>						Passeriformes
<i>Estrilda troglodytes</i>	Apahida (CJ)	Führer Lajos	xx.09.1912	M	adult	Passeriformes
<i>Eupsaltria australis</i>	Victoria (AU)	Gasilemaine	xx.07.1897			Passeriformes
<i>Falco cherrug</i>	Bonţida (CJ)	Führer Lajos	xx.04.1911	F		Falconiformes
<i>Falco cherrug</i>	Bonţida (CJ)	Führer Lajos	xx.04.1911	F	adult	Falconiformes
<i>Falco cherrug</i>	Râscruci (CJ)	Führer Lajos	xx.02.1910	M		Falconiformes
<i>Falco cherrug</i>	Râscruci (CJ)	Führer Lajos	xx.11.1909	M		Falconiformes
<i>Falco cherrug</i>				M	adult	Falconiformes
<i>Falco cherrug</i>				F	adult	Falconiformes
<i>Falco cherrug</i>				M	adult	Falconiformes
<i>Falco cherrug</i>				F	juvenile	Falconiformes
<i>Falco cherrug</i>				F	adult	Falconiformes
<i>Falco cherrug</i>				M	adult	Falconiformes
<i>Falco cherrug</i>				F	adult	Falconiformes
<i>Falco cherrug</i>	Râscruci (CJ)		xx.03.1911	M	adult	Falconiformes
<i>Falco naumanni</i>	Cluj-Napoca (CJ)	Führer Lajos	01.09.1905	M	adult	Falconiformes
<i>Falco peregrinus</i>	Aghireş (CJ)		xx.03.1910	M	adult	Falconiformes
<i>Falco peregrinus</i>				F	juvenile	Falconiformes
<i>Falco subbuteo</i>	Cluj-Napoca (CJ)	Herman Ottó?	xx.xx.1864	M	juvenile	Falconiformes
<i>Falco subbuteo</i>	Cluj-Napoca (CJ)	Herman Ottó?	xx.xx.1864	F	adult	Falconiformes
<i>Falco subbuteo</i>	Cluj-Napoca (CJ)	Herman Ottó?	xx.xx.1864	M	adult	Falconiformes
<i>Falco subbuteo</i>	Geaca (CJ)	Vincze Ferencz	07.09.1970	M	adult	Falconiformes
<i>Falco subbuteo</i>	Turea (CJ)		27.08.1965	M	adult	Falconiformes
<i>Falco subbuteo</i>					adult	Falconiformes
<i>Falco subbuteo</i>					adult	Falconiformes
<i>Falco tinnunculus</i>	Cluj-Napoca (CJ)	Zwörner Sándor	26.04.1903	M	adult	Falconiformes
<i>Falco tinnunculus</i>	Floreşti (CJ)	Vincze Ferencz	13.08.1970	M	adult	Falconiformes
<i>Falco tinnunculus</i>	Galiţia de Est		29.04.1916	F		Falconiformes
<i>Falco tinnunculus</i>				F	juvenile	Falconiformes
<i>Falco tinnunculus</i>				M	juvenile	Falconiformes
<i>Falco vespertinus</i>	Râscruci (CJ)	Führer Lajos	xx.05.1910	F	adult	Falconiformes
<i>Ficedula albicollis</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Ficedula albicollis</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Ficedula albicollis</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Ficedula albicollis</i>	Gilău (CJ)	Führer Lajos	xx.06.1911	M	adult	Passeriformes
<i>Ficedula albicollis</i>				M	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	M	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1909	M	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.08.1912	M	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Făget (CJ)	Führer Lajos	xx.09.1909	M	juvenile	Passeriformes
<i>Ficedula hypoleuca</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	F	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Ficedula hypoleuca</i>	Gilău (CJ)	Führer Lajos	xx.06.1911	M	adult	Passeriformes
<i>Ficedula hypoleuca</i>				M	adult	Passeriformes
<i>Ficedula parva</i>	Făget (CJ)	Führer Lajos	xx.09.1909	F	juvenile	Passeriformes
<i>Ficedula parva</i>	Făget (CJ)	Führer Lajos	xx.09.1909	M	juvenile	Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Ficedula parva</i>	Făget (CJ)	Führer Lajos	xx.05.1911		juvenile	Passeriformes
<i>Fringilla montifringilla</i>				F		Passeriformes
<i>Fringilla montifringilla</i>				F		Passeriformes
<i>Fringilla montifringilla</i>				M		Passeriformes
<i>Fringilla montifringilla</i>				M		Passeriformes
<i>Fulica atra</i>	Geaca (CJ)	Herman Ottó	xx.03.1867			Gruiformes
<i>Fulica atra</i>	Geaca (CJ)	Herman Ottó	xx.03.1867	M		Gruiformes
<i>Fulica atra</i>	Geaca (CJ)	Vincze Ferencz	15.10.1971	M		Gruiformes
<i>Fulica atra</i>	Geaca (CJ)	Vincze Ferencz	15.10.1971	F		Gruiformes
<i>Fulica atra</i>		Vincze Ferencz	22.11.1973			Gruiformes
<i>Fulica atra</i>		Vincze Ferencz	22.11.1973			Gruiformes
<i>Fulmarus glacialis</i>					adult	Procelariiformes
<i>Galerida cristata</i>	Apahida (CJ)	Führer Lajos	27.10.1912	M		Passeriformes
<i>Galerida cristata</i>	Cluj-Napoca (CJ)	Zwörner Sándor	25.04.1904	M		Passeriformes
<i>Galerida cristata</i>	Cluj-Napoca (CJ)	Führer Lajos	20.02.1913	M		Passeriformes
<i>Galerida cristata</i>	Cluj-Napoca (CJ)	Führer Lajos	13.03.1903	M		Passeriformes
<i>Galerida cristata</i>	Ţăga (CJ)	Fülöp Herman	31.01.1960	F		Passeriformes
<i>Galerida cristata</i>	Ţăga (CJ)	Fülöp Herman	31.01.1960	M		Passeriformes
<i>Galerida cristata</i>						Passeriformes
<i>Gallinula chloropus</i>	Apahida (CJ)	Führer Lajos	xx.11.1909	M	adult	Gruiformes
<i>Gallinula chloropus</i>	Sucutard (CJ)	Vincze Ferencz	20.10.1971		juvenile	Gruiformes
<i>Gallinula chloropus</i>	Ţăga (CJ)	Ajtai K. Gyula	02.05.1910	M	adult	Gruiformes
<i>Gallinula chloropus</i>					adult	Gruiformes
<i>Gallinago gallinago</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	M		Charadriiformes
<i>Gallinago gallinago</i>	Apahida (CJ)	Führer Lajos	xx.08.1912		juvenile	Charadriiformes
<i>Gallinago gallinago</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F		Charadriiformes
<i>Gallinago gallinago</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M		Charadriiformes
<i>Gallinago gallinago</i>						Charadriiformes
<i>Gypaetus barbatus</i>	Tibet (Asia)			M	adult	Accipitriformes
<i>Gyps fulvus</i>		Führer Lajos	xx.07.1907	F	juvenile	Accipitriformes
<i>Haliaeetus albicilla</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Accipitriformes
<i>Haliaeetus albicilla</i>	Zau de Câmpie (MS)	Führer Lajos	xx.08.1907	F	juvenile	Accipitriformes
<i>Haliaeetus albicilla</i>	Zau de Câmpie (MS)	Führer Lajos	xx.08.1907	F	imatur	Accipitriformes
<i>Haliaeetus albicilla</i>	Zau de Câmpie (MS)	Führer Lajos	xx.07.1907	F	subadult	Accipitriformes
<i>Haliaeetus albicilla</i>	Zau de Câmpie (MS)	Führer Lajos	xx.08.1907	F	imatur	Accipitriformes
<i>Hieraaetus pennatus</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Accipitriformes
<i>Hieraaetus pennatus</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Accipitriformes
<i>Hieraaetus pennatus</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Accipitriformes
<i>Hieraaetus pennatus</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M		Accipitriformes
<i>Hieraaetus pennatus</i>						Accipitriformes
<i>Himantopus himantopus</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Charadriiformes
<i>Himantopus himantopus</i>						Charadriiformes
<i>Hippolais icterina</i>	Cluj-Napoca (CJ)	Korodi-Gál János	28.05.1965	M	adult	Passeriformes
<i>Hippolais icterina</i>	Cluj-Napoca (CJ)	Korodi-Gál János	28.05.1965	F	adult	Passeriformes
<i>Hippolais icterina</i>	Cluj-Napoca (CJ)	Korodi-Gál János	28.05.1965	M	adult	Passeriformes
<i>Hippolais icterina</i>	Cluj-Napoca (CJ)	Korodi-Gál János	28.05.1965	M	adult	Passeriformes
<i>Hirundo rustica</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Passeriformes
<i>Hirundo rustica</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Passeriformes
<i>Hirundo rustica</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	juvenile	Passeriformes
<i>Hirundo rustica</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Passeriformes
<i>Hirundo rustica</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	1y		Passeriformes
<i>Hirundo rustica</i>	Floreşti (CJ)	Führer Lajos	xx.05.1913	F	adult	Passeriformes
<i>Hirundo rustica</i>	Floreşti (CJ)	Führer Lajos	xx.05.1913	F	adult	Passeriformes
<i>Hirundo rustica</i>				F		Passeriformes
<i>Iduna pallida</i>	Cluj-Napoca (CJ)	Korodi-Gál János	28.05.1965	F	adult	Passeriformes
<i>Ixobrychus minutus</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M	adult	Pelecaniformes
<i>Jynx torquilla</i>	Floreşti (CJ)	Führer Lajos	xx.04.1913	M		Piciformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Jynx torquilla</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	F		Piciformes
<i>Jynx torquilla</i>	Viștea (CJ)	Führer Lajos	xx.09.1909	F		Piciformes
<i>Lanius collurio</i>	Baciu (CJ)	Ajtai K. Gyula	26.05.1910	M		Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)	Führer Lajos	01.08.1905	M		Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)	Führer Lajos	27.07.1905	F		Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)		xx.07.1891	M		Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1910	M		Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)	Vincze Ferencz	03.08.1970	F		Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.08.1912	F	juvenile	Passeriformes
<i>Lanius collurio</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909		juvenile	Passeriformes
<i>Lanius collurio</i>	Cuzăplac (SJ)		16.07.1913	F		Passeriformes
<i>Lanius collurio</i>	Gilău (CJ)	Führer Lajos	xx.10.1909		juvenile	Passeriformes
<i>Lanius collurio</i>	Gilău (CJ)	Führer Lajos	xx.10.1909		juvenile	Passeriformes
<i>Lanius collurio</i>				M		Passeriformes
<i>Lanius collurio</i>				M		Passeriformes
<i>Lanius excubitor</i>	Cuzăplac (SJ)	Kómis Lajos	16.12.1913	M	adult	Passeriformes
<i>Lanius excubitor</i>	Florești (CJ)	Führer Lajos	xx.12.1912		juvenile	Passeriformes
<i>Lanius excubitor</i>	Florești (CJ)	Führer Lajos	xx.12.1912	M	adult	Passeriformes
<i>Lanius excubitor</i>	Someșeni (CJ)	Vincze Ferencz	22.10.1972	M	adult	Passeriformes
<i>Lanius minor</i>	Baciu (CJ)	Führer Lajos	xx.05.1910	M	adult	Passeriformes
<i>Lanius minor</i>						Passeriformes
<i>Larus canus</i>	Apahida (CJ)	Führer Lajos	xx.02.1910	M	immatur	Charadriiformes
<i>Larus canus</i>	Hortobágy (HU)	Nagy Jenő	xx.04.1907	F	adult	Charadriiformes
<i>Larus canus</i>	Zau de Câmpie (MS)		xx.03.1911	F	adult	Charadriiformes
<i>Larus canus</i>	Zau de Câmpie (MS)		xx.03.1911	M	adult	Charadriiformes
<i>Larus fuscus</i>	Someșeni (CJ)		xx.10.1902	F	juvenile	Charadriiformes
<i>Larus marinus</i>					adult	Charadriiformes
<i>Larus michahellis</i>	Apahida (CJ)	Führer Lajos	xx.11.1909	F		Charadriiformes
<i>Larus michahellis</i>	Apahida (CJ)	Führer Lajos	xx.11.1909	F		Charadriiformes
<i>Larus michahellis</i>					immatur	Charadriiformes
<i>Larus michahellis</i>					adult	Charadriiformes
<i>Larus ridibundus</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F	adult	Charadriiformes
<i>Larus ridibundus</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F	juvenile	Charadriiformes
<i>Larus ridibundus</i>	Apahida (CJ)	Führer Lajos	xx.11.1909	M	juvenile	Charadriiformes
<i>Larus ridibundus</i>	Dezmir (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Charadriiformes
<i>Larus ridibundus</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M	juvenile	Charadriiformes
<i>Larus ridibundus</i>	Mociu (CJ)	Führer Lajos	xx.06.1910	F	adult	Charadriiformes
<i>Larus ridibundus</i>	Mociu (CJ)	Führer Lajos	xx.06.1910	M	adult	Charadriiformes
<i>Larus ridibundus</i>	Mociu (CJ)	Führer Lajos	xx.06.1910	M	adult	Charadriiformes
<i>Larus ridibundus</i>					adult	Charadriiformes
<i>Larus ridibundus</i>	Zau de Câmpie (MS)		xx.04.1911		adult	Charadriiformes
<i>Larus ridibundus</i>	Zau de Câmpie (MS)		xx.04.1911		immatur	Charadriiformes
<i>Larus ridibundus</i>					juvenile	Charadriiformes
<i>Larus ridibundus</i>					adult	Charadriiformes
<i>Leiopicus medius</i>	Aghireș (CJ)	Führer Lajos	xx.09.1909	M		Piciformes
<i>Leiopicus medius</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Piciformes
<i>Leiopicus medius</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	F		Piciformes
<i>Leiopicus medius</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Piciformes
<i>Leiopicus medius</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Piciformes
<i>Leiopicus medius</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Piciformes
<i>Leiopicus medius</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Piciformes
<i>Leiopicus medius</i>	Micești (CJ)	Führer Lajos	xx.11.1909	F		Piciformes
<i>Leiopicus medius</i>	Micești (CJ)	Führer Lajos	xx.11.1909	M		Piciformes
<i>Leiopicus medius</i>	Micești (CJ)	Führer Lajos	xx.11.1909	M		Piciformes
<i>Leiopicus medius</i>	Unguraș (CJ)	Führer Lajos	xx.09.1909	F		Piciformes
<i>Leiopicus medius</i>		Führer Lajos	xx.09.1909	F		Piciformes
<i>Lichenostomus fuscus</i>	Victoria (AU)	Gasilemaine	xx.07.1897			Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Limosa limosa</i>	Someşeni (CJ)	Vincze Ferencz	26.07.1973	M	juvenile	Charadriiformes
<i>Limosa limosa</i>	Ungaria (HU)		xx.04.1911	M	adult	Charadriiformes
<i>Linaria cannabina</i>	Cuzăplac (SJ)	Kómis Lajos	xx.07.1913	F		Passeriformes
<i>Linaria cannabina</i>	Cuzăplac (SJ)	Kómis Lajos	23.10.1913	M		Passeriformes
<i>Linaria cannabina</i>				M		Passeriformes
<i>Linaria cannabina</i>				M		Passeriformes
<i>Locustella luscionides</i>	Apahida (CJ)	Führer Lajos	xx.05.1911			Passeriformes
<i>Locustella luscionides</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Locustella luscionides</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Locustella luscionides</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Locustella luscionides</i>	Apahida (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Locustella luscionides</i>	Apahida (CJ)	Führer Lajos	xx.05.1911			Passeriformes
<i>Locustella luscionides</i>						Passeriformes
<i>Locustella luscionides</i>						Passeriformes
<i>Locustella luscionides</i>						Passeriformes
<i>Locustella luscionides</i>			xx.xx.1911			Passeriformes
<i>Locustella luscionides</i>			xx.xx.1911			Passeriformes
<i>Loxia curvirostra</i>	Cluj-Napoca (CJ)	Vincze Ferencz	13.10.1970	M	adult	Passeriformes
<i>Loxia curvirostra</i>	Cluj-Napoca (CJ)	Vincze Ferencz	13.10.1970	F	adult	Passeriformes
<i>Loxia curvirostra</i>	Cluj-Napoca (CJ)	Fülöp Herman	11.12.1959	F	adult	Passeriformes
<i>Lullula arborea</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Lullula arborea</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	F	adult	Passeriformes
<i>Lullula arborea</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Lullula arborea</i>	Plesca (SJ)	Neuwirth János	15.03.1903	F	adult	Passeriformes
<i>Lullula arborea</i>					adult	Passeriformes
<i>Lullula arborea</i>					adult	Passeriformes
<i>Luscinia luscinia</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	F		Passeriformes
<i>Luscinia luscinia</i>	Aghireş (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Luscinia luscinia</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911	F		Passeriformes
<i>Luscinia luscinia</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911	F		Passeriformes
<i>Luscinia luscinia</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Luscinia luscinia</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Luscinia luscinia</i>	Făget (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Luscinia luscinia</i>	Făget (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Luscinia luscinia</i>	Făget (CJ)	Führer Lajos	xx.09.1909	F		Passeriformes
<i>Luscinia luscinia</i>	Făget (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Luscinia luscinia</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Luscinia megarhynchos</i>	Aghireş (CJ)	Führer Lajos	xx.05.1911	F		Passeriformes
<i>Luscinia megarhynchos</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Luscinia megarhynchos</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Luscinia megarhynchos</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.08.1912	M		Passeriformes
<i>Lymnocyptes minimus</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	F		Charadriiformes
<i>Lymnocyptes minimus</i>	Aghireş (CJ)	Führer Lajos	xx.09.1909	M		Charadriiformes
<i>Lymnocyptes minimus</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	M		Charadriiformes
<i>Lymnocyptes minimus</i>						Charadriiformes
<i>Lymnocyptes minimus</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	F		Charadriiformes
<i>Lymnocyptes minimus</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	F		Charadriiformes
<i>Lymnocyptes minimus</i>	Răscruci (CJ)	Führer Lajos	xx.11.1909	M		Charadriiformes
<i>Mareca strepera</i>	Apahida (CJ)	Führer Lajos	xx.04.1911	F		Anseriformes
<i>Mareca strepera</i>	Apahida (CJ)	Führer Lajos	xx.11.1909	M		Anseriformes
<i>Melopsittacus undulatus</i>				M	adult	Psittaciformes
<i>Mergus merganser</i>	Cluj-Napoca (CJ)	Zwörner Sándor	15.10.1903	F	adult	Anseriformes
<i>Merops apiaster</i>	Bucureşti (B)	Vincze Ferencz	12.05.1969	M	adult	Coraciiformes
<i>Merops apiaster</i>	Canaraua Fetei (CT)	Vincze Ferencz	12.05.1969			Coraciiformes
<i>Merops apiaster</i>		Führer Lajos	xx.05.1911	M		Coraciiformes
<i>Merops apiaster</i>		Führer Lajos	xx.05.1911	M		Coraciiformes
<i>Milvus migrans</i>	Apahida (CJ)		xx.11.1911	M	juvenile	Accipitriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Milvus migrans</i>					juvenile	Accipitriformes
<i>Monticola saxatilis</i>						Passeriformes
<i>Morus bassanus</i>	Norvegia	Lehne W.	xx.xx.1969		adult	Suliformes
<i>Morus bassanus</i>					juvenile	Suliformes
<i>Motacilla alba</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Motacilla alba</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Motacilla alba</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Motacilla alba</i>	Apahida (CJ)	Führer Lajos	xx.11.1909	F		Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Zwörner Sándor	02.04.1904	F		Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	28.09.1912	M	juvenile	Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	juvenile	Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	juvenile	Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	juvenile	Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912		juvenile	Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.03.1910	M		Passeriformes
<i>Motacilla alba</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.01.1909	F		Passeriformes
<i>Motacilla alba</i>	Floreşti (CJ)	Führer Lajos	xx.04.1913	M		Passeriformes
<i>Motacilla alba</i>						Passeriformes
<i>Motacilla alba</i>				M		Passeriformes
<i>Motacilla alba</i>				M		Passeriformes
<i>Motacilla cinerea</i>	Colibiţa (BN)	Vincze Ferencz	07.05.1971	F		Passeriformes
<i>Motacilla cinerea</i>				M		Passeriformes
<i>Motacilla cinerea</i>				F		Passeriformes
<i>Motacilla cinerea</i>				M		Passeriformes
<i>Motacilla cinerea</i>				F		Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	10.10.1912	M	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	F	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	adult	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	F	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	F	juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912		juvenile	Passeriformes
<i>Muscicapa striata</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	F	juvenile	Passeriformes
<i>Myiarchus cinerascens</i>	California (USA)	Xantus János	xx.xx.1859	F	adult	Passeriformes
<i>Nucifraga caryocatactes</i>	Măguri-Răcăţau (CJ)	Vincze Ferencz	03.08.1970	M		Passeriformes
<i>Nucifraga caryocatactes</i>						Passeriformes
<i>Nucifraga caryocatactes</i>						Passeriformes
<i>Nycticorax nycticorax</i>	Cefa (BH)	Vincze Ferencz	19.12.1970	M	adult	Pelecaniformes
<i>Nycticorax nycticorax</i>	Cefa (BH)	Vincze Ferencz	25.06.1970	F	juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Cefa (BH)	Vincze Ferencz	25.06.1970	F	juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Cefa (BH)	Vincze Ferencz	25.06.1970	M	juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Cefa (BH)	Vincze Ferencz	25.06.1970	M	juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	M	adult	Pelecaniformes
<i>Nycticorax nycticorax</i>	Mociu (CJ)	Führer Lajos	xx.05.1910	M	adult	Pelecaniformes
<i>Nycticorax nycticorax</i>	Dej (CJ)	Führer Lajos	24.06.1903	M	adult	Pelecaniformes
<i>Nycticorax nycticorax</i>	Dej (CJ)	Führer Lajos	17.06.1903	M	adult	Pelecaniformes
<i>Nycticorax nycticorax</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909		juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909		juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909		juvenile	Pelecaniformes
<i>Nycticorax nycticorax</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909		juvenile	Pelecaniformes
<i>Oenanthe oenanthe</i>	Baciu (CJ)	Vincze Ferencz	25.07.1910	F	juvenile	Passeriformes
<i>Oenanthe oenanthe</i>	Gilău (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Gilău (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Oenanthe oenanthe</i>	Păniceni (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Păniceni (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Păniceni (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Păniceni (CJ)	Führer Lajos	xx.04.1911	F	adult	Passeriformes
<i>Oenanthe oenanthe</i>	Vița (CJ)	Führer Lajos	xx.09.1912	F	adult	Passeriformes
<i>Oriolus oriolus</i>	București (B)	Vincze Ferencz	12.05.1969	F	adult	Passeriformes
<i>Oriolus oriolus</i>	Brăncovenesti (MS)	Vincze Ferencz	12.05.1971	M	adult	Passeriformes
<i>Oriolus oriolus</i>	Lita (CJ)	Vincze Ferencz	16.05.1983	M	adult	Passeriformes
<i>Otus scops</i>					adult	Strigiformes
<i>Otus scops</i>					adult	Strigiformes
<i>Otus scops</i>					adult	Strigiformes
<i>Parus major</i>	Cluj-Napoca (CJ)	Führer Lajos	30.10.1902	F		Passeriformes
<i>Parus major</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	20.01.1910	M		Passeriformes
<i>Parus major</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	20.01.1910	M		Passeriformes
<i>Parus major</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M		Passeriformes
<i>Parus major</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Parus major</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Parus major</i>						Passeriformes
<i>Parus major</i>				F		Passeriformes
<i>Parus major</i>				F		Passeriformes
<i>Passer domesticus</i>	Sucutard (CJ)	Fülöp Herman	31.01.1960	F	adult	Passeriformes
<i>Passer domesticus</i>	Sucutard (CJ)	Fülöp Herman	31.01.1960	F	adult	Passeriformes
<i>Passer domesticus</i>	Sucutard (CJ)	Fülöp Herman	31.01.1960	M	adult	Passeriformes
<i>Perdix perdix</i>	Baciu (CJ)	Vincze Ferencz	12.05.1970	F		Galliformes
<i>Periparus ater</i>	Albac (AB)		xx.03.1913	M		Passeriformes
<i>Periparus ater</i>	Albac (AB)		xx.03.1913	M		Passeriformes
<i>Periparus ater</i>	Albac (AB)		xx.03.1913	F		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	F		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	F		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M		Passeriformes
<i>Periparus ater</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Periparus ater</i>						Passeriformes
<i>Periparus ater</i>						Passeriformes
<i>Periparus ater</i>						Passeriformes
<i>Pernis apivorus</i>				M	adult	Accipitriformes
<i>Phoenicurus ochruros</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Phoenicurus ochruros</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Phoenicurus ochruros</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Phoenicurus phoenicurus</i>	Cluj-Napoca (CJ)	Vincze Ferencz	26.05.1965	M	adult	Passeriformes
<i>Phoenicurus phoenicurus</i>	Cuzăplac (SJ)	Kómis Lajos	02.12.1903	F		Passeriformes
<i>Phoenicurus phoenicurus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Phoenicurus phoenicurus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Phoenicurus phoenicurus</i>	Gilău (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Passeriformes
<i>Phoenicurus phoenicurus</i>				M		Passeriformes
<i>Phoenicurus phoenicurus</i>						Passeriformes
<i>Phoenicurus phoenicurus</i>						Passeriformes
<i>Phoenicurus phoenicurus</i>				M		Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>	Florești (CJ)	Führer Lajos	xx.04.1913	M	adult	Passeriformes
<i>Phylloscopus collybita</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Phylloscopus collybita</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Phylloscopus collybita</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Phylloscopus collybita</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912		juvenile	Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Phylloscopus collybita</i>	Feleac (CJ)	Führer Lajos	xx.05.1911	F		Passeriformes
<i>Phylloscopus collybita</i>	Feleac (CJ)	Führer Lajos	xx.05.1911	F		Passeriformes
<i>Phylloscopus collybita</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Phylloscopus collybita</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	F		Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Phylloscopus collybita</i>						Passeriformes
<i>Pica pica</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.03.1912	M		Passeriformes
<i>Pica pica</i>	Cluj-Napoca (CJ)	Zwörner Sándor	14.02.1904	M		Passeriformes
<i>Pica pica</i>						Passeriformes
<i>Picus canus</i>	Ciurila (CJ)	Führer Lajos	xx.11.1909	M	adult	Piciformes
<i>Picus canus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1912	F		Piciformes
<i>Picus canus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.11.1909	F	adult	Piciformes
<i>Picus canus</i>	Cuzăplac (SJ)	Kómis Lajos	03.12.1913	F	adult	Piciformes
<i>Picus canus</i>				M	adult	Piciformes
<i>Picus viridis</i>				F	adult	Piciformes
<i>Picus viridis</i>				F	adult	Piciformes
<i>Platalea leucorodia</i>	Delta Dunării	Fülöp Herman	15.04.1950		adult	Pelecaniformes
<i>Platalea leucorodia</i>	Dobrogea	Führer Lajos	xx.xx.1911	M	adult	Pelecaniformes
<i>Platalea leucorodia</i>	Dobrogea	Führer Lajos	xx.xx.1911	F	adult	Pelecaniformes
<i>Platalea leucorodia</i>	Dobrogea	Führer Lajos	xx.xx.1911	M	adult	Pelecaniformes
<i>Platalea leucorodia</i>	Dobrogea	Führer Lajos	xx.xx.1911	M	adult	Pelecaniformes
<i>Platalea leucorodia</i>	Dobrogea	Führer Lajos	xx.xx.1911	F	adult	Pelecaniformes
<i>Platalea leucorodia</i>	Mociu (CJ)	Führer Lajos	xx.07.1910	M	adult	Pelecaniformes
<i>Podiceps cristatus</i>	Cefa (BH)	Vincze Ferencz	26.06.1970	M		Podicipediformes
<i>Podiceps cristatus</i>	Cefa (BH)	Vincze Ferencz	26.06.1970	M	adult	Podicipediformes
<i>Podiceps cristatus</i>	Cefa (BH)	Vincze Ferencz	26.06.1970	M	adult	Podicipediformes
<i>Podiceps cristatus</i>	Cefa (BH)	Vincze Ferencz	26.06.1970	M	adult	Podicipediformes
<i>Podiceps cristatus</i>	Cluj-Napoca (CJ)	Zwörner Sándor	xx.10.1962	F	adult	Podicipediformes
<i>Podiceps cristatus</i>						Podicipediformes
<i>Podiceps grisegena</i>	Geaca (CJ)	Vincze Ferencz	03.06.1970	M	adult	Podicipediformes
<i>Podiceps nigricollis</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F		Podicipediformes
<i>Podiceps nigricollis</i>	Dej (CJ)	Varró Dezső	07.08.1944	M		Podicipediformes
<i>Poecile lugubris</i>	Cuzăplac (SJ)	Kómis Lajos	04.01.1914	M	adult	Passeriformes
<i>Poecile lugubris</i>	Gilău (CJ)	Führer Lajos	xx.06.1911	M		Passeriformes
<i>Poecile lugubris</i>	Gilău (CJ)	Führer Lajos	xx.06.1911	F	adult	Passeriformes
<i>Poecile lugubris</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	F	adult	Passeriformes
<i>Poecile lugubris</i>					adult	Passeriformes
<i>Poecile palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	F		Passeriformes
<i>Poecile palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M		Passeriformes
<i>Poecile palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	M		Passeriformes
<i>Poecile palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	15.10.1912	M		Passeriformes
<i>Poecile palustris</i>	Cluj-Napoca (CJ)	Führer Lajos	15.10.1912	M		Passeriformes
<i>Poecile palustris</i>	Cuzăplac (SJ)	Kómis Lajos	16.10.1913	F		Passeriformes
<i>Poecile palustris</i>	Micești (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Poecile palustris</i>	Micești (CJ)	Führer Lajos	xx.02.1910	F		Passeriformes
<i>Poecile palustris</i>	Micești (CJ)	Führer Lajos	xx.02.1910	M		Passeriformes
<i>Poecile palustris</i>						Passeriformes
<i>Poecile palustris</i>						Passeriformes
<i>Poecile palustris</i>						Passeriformes
<i>Poecile palustris</i>						Passeriformes
<i>Pomatostomus superciliosus</i>	Victoria (AU)	Gasilemaine	xx.09.1897			Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Porzana porzana</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	F	juvenile	Gruiformes
<i>Porzana porzana</i>	Apahida (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Gruiformes
<i>Porzana porzana</i>	Apahida (CJ)	Zwörner Sándor	06.10.1903	M	juvenile	Gruiformes
<i>Porzana porzana</i>	Florești (CJ)	Führer Lajos	xx.05.1911	M	adult	Gruiformes
<i>Porzana porzana</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Gruiformes
<i>Porzana porzana</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M	juvenile	Gruiformes
<i>Porzana porzana</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M	adult	Gruiformes
<i>Prunella collaris</i>			xx.xx.1911			Passeriformes
<i>Prunella collaris</i>			xx.xx.1911			Passeriformes
<i>Prunella collaris</i>			xx.xx.1911			Passeriformes
<i>Prunella collaris</i>			xx.xx.1911			Passeriformes
<i>Prunella collaris</i>						Passeriformes
<i>Prunella modularis</i>	Cuzăplac (SJ)	Kómis Lajos	16.10.1913	M	adult	Passeriformes
<i>Prunella modularis</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Prunella modularis</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Prunella modularis</i>						Passeriformes
<i>Prunella modularis</i>						Passeriformes
<i>Prunella modularis</i>						Passeriformes
<i>Prunella modularis</i>						Passeriformes
<i>Pycnonotus cafer</i>	Sindanglaya	Xántus János	30.06.1870			Passeriformes
<i>Pyrrhula phyrhula</i>	Cluj-Napoca (CJ)	Fülöp Herman	14.03.1954	F	adult	Passeriformes
<i>Pyrrhula phyrhula</i>	Cluj-Napoca (CJ)		14.03.1954	M	adult	Passeriformes
<i>Pyrrhula phyrhula</i>	Cluj-Napoca (CJ)		14.03.1955	M	adult	Passeriformes
<i>Pyrrhula phyrhula</i>	Cluj-Napoca (CJ)	Fülöp Herman	23.02.1960	M	adult	Passeriformes
<i>Pyrrhula phyrhula</i>				M	adult	Passeriformes
<i>Pyrrhula phyrhula</i>				M		Passeriformes
<i>Recurvirostra avosetta</i>	Someșeni (CJ)	Führer Lajos	xx.09.1912		juvenile	Charadriiformes
<i>Regulus ignicapillus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Regulus ignicapillus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Regulus ignicapillus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus ignicapillus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	20.01.1910	M		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1909	F		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1909	F		Passeriformes
<i>Regulus regulus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1909	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.04.1911	M		Passeriformes
<i>Regulus regulus</i>	Feleacu (CJ)	Führer Lajos	xx.xx.1911	M		Passeriformes
<i>Regulus regulus</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	F		Passeriformes
<i>Regulus regulus</i>	Micești (CJ)	Führer Lajos	xx.11.1909	F		Passeriformes
<i>Regulus regulus</i>	Micești (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Regulus regulus</i>						Passeriformes
<i>Regulus regulus</i>						Passeriformes
<i>Regulus regulus</i>						Passeriformes
<i>Regulus regulus</i>						Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Regulus regulus</i>						Passeriformes
<i>Regulus regulus</i>						Passeriformes
<i>Regulus regulus</i>						Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	F		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	F		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	F		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	F		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	M		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	M		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	M		Passeriformes
<i>Remiz pendulinus</i>	Ungaria (HU)	Führer Lajos	xx.06.1911	M		Passeriformes
<i>Saxicola rubetra</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	adult	Passeriformes
<i>Saxicola rubetra</i>	Baciu (CJ)	Führer Lajos	26.05.1910	F	adult	Passeriformes
<i>Saxicola rubetra</i>	Floreşti (CJ)	Führer Lajos	xx.04.1913			Passeriformes
<i>Saxicola rubicola</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	adult	Passeriformes
<i>Saxicola rubicola</i>	Cluj-Napoca (CJ)	Vincze Ferencz	18.03.1965	M	adult	Passeriformes
<i>Saxicola rubicola</i>	Cluj-Napoca (CJ)	Neuwirth János	14.03.1903	M	adult	Passeriformes
<i>Saxicola rubicola</i>	Cuzăplac (SJ)	Kómis Lajos	11.07.1913	F	juvenile	Passeriformes
<i>Saxicola rubicola</i>	Cuzăplac (SJ)	Kómis Lajos	11.07.1913	M	adult	Passeriformes
<i>Saxicola rubicola</i>	Fănaţele Clujului (CJ)	Neuwirth János	xx.04.1903	F	adult	Passeriformes
<i>Scolopax rusticola</i>	Feleacu (CJ)	Führer Lajos	xx.xx.1911			Charadriiformes
<i>Sitta europaea</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1912	M		Passeriformes
<i>Sitta europaea</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.04.1911	M	adult	Passeriformes
<i>Sitta europaea</i>	Feleac (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Sitta europaea</i>	Feleac (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Spatula querquedula</i>	Geaca (CJ)	Fülöp Herman	29.03.1957	M	adult	Anseriformes
<i>Spatula querquedula</i>	Geaca (CJ)	Fülöp Herman	29.03.1957	f	adult	Anseriformes
<i>Spatula querquedula</i>	Apahida (CJ)	Führer Lajos	xx.04.1911			Anseriformes
<i>Spatula querquedula</i>	Someşeni (CJ)	Vincze Ferencz	26.07.1973	F		Anseriformes
<i>Spinus spinus</i>	Floreşti (CJ)	Ráthonyi Károly	16.12.1943	M		Passeriformes
<i>Sterna hirundo</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	F	adult	Charadriiformes
<i>Sterna hirundo</i>	Apahida (CJ)	Führer Lajos	xx.09.1909	M	adult	Charadriiformes
<i>Sternula albifrons</i>					adult	Charadriiformes
<i>Streptopelia turtur</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.08.1912		adult	Columbiformes
<i>Streptopelia turtur</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	M	adult	Columbiformes
<i>Streptopelia turtur</i>					adult	Columbiformes
<i>Streptopelia turtur</i>					adult	Columbiformes
<i>Streptopelia turtur</i>					adult	Columbiformes
<i>Streptopelia turtur</i>					adult	Columbiformes
<i>Strix uralensis</i>	Jibou (SJ)	Zwörner Sándor	20.04.1903	F		Strigiformes
<i>Strix uralensis</i>						Strigiformes
<i>Sturnus vulgaris</i>	Colibiţa (BN)	Vincze Ferencz	06.05.1971	M	adult	Passeriformes
<i>Sturnus vulgaris</i>						Passeriformes
<i>Sylvia atricapilla</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M		Passeriformes
<i>Sylvia atricapilla</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M		Passeriformes
<i>Sylvia atricapilla</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.09.1912	M	juvenile	Passeriformes
<i>Sylvia atricapilla</i>	Făget (CJ)	Führer Lajos	xx.09.1909	F	juvenile	Passeriformes
<i>Sylvia atricapilla</i>	Feleacu (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Sylvia atricapilla</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Sylvia atricapilla</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Sylvia atricapilla</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Passeriformes
<i>Sylvia atricapilla</i>	Gilău (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Passeriformes
<i>Sylvia atricapilla</i>				M	adult	Passeriformes
<i>Sylvia atricapilla</i>				F		Passeriformes
<i>Sylvia communis</i>						Passeriformes
<i>Sylvia communis</i>	Baciu (CJ)	Ajtai K. Gyula	26.06.1910	M		Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Sylvia communis</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.06.1910	F		Passeriformes
<i>Sylvia communis</i>	Floreşti (CJ)	Führer Lajos	xx.04.1913	M		Passeriformes
<i>Sylvia communis</i>	Gilău (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Sylvia communis</i>						Passeriformes
<i>Sylvia communis</i>						Passeriformes
<i>Sylvia communis</i>						Passeriformes
<i>Sylvia communis</i>						Passeriformes
<i>Sylvia curruca</i>	Aghireş (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Sylvia curruca</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.06.1911			Passeriformes
<i>Sylvia curruca</i>						Passeriformes
<i>Sylvia nisoria</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M		Passeriformes
<i>Sylvia nisoria</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	F		Passeriformes
<i>Tachybaptus ruficollis</i>	Geaca (CJ)	Vincze Ferencz	15.10.1970	M		Podicipediformes
<i>Tachybaptus ruficollis</i>	Geaca (CJ)	Vincze Ferencz	30.08.1971	F		Podicipediformes
<i>Tachybaptus ruficollis</i>	Hăghig (CV)		28.12.1902	F		Podicipediformes
<i>Tachybaptus ruficollis</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	F		Podicipediformes
<i>Tachybaptus ruficollis</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F		Podicipediformes
<i>Tachybaptus ruficollis</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M		Podicipediformes
<i>Tringa erythropus</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M	adult	Charadriiformes
<i>Tringa erythropus</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M	adult	Charadriiformes
<i>Tringa erythropus</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	F	adult	Charadriiformes
<i>Tringa glareola</i>	Gilău (CJ)	Führer Lajos	xx.05.1911	M	adult	Charadriiformes
<i>Tringa glareola</i>	Someşeni (CJ)	Vincze Ferencz	24.07.1973	M	juvenile	Charadriiformes
<i>Tringa glareola</i>					adult	Charadriiformes
<i>Tringa nebularia</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M		Charadriiformes
<i>Tringa nebularia</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M		Charadriiformes
<i>Tringa nebularia</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M		Charadriiformes
<i>Tringa nebularia</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M		Charadriiformes
<i>Tringa nebularia</i>	Mociu (CJ)	Führer Lajos	xx.10.1909	M		Charadriiformes
<i>Tringa nebularia</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F		Charadriiformes
<i>Tringa nebularia</i>						Charadriiformes
<i>Tringa ochropus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Charadriiformes
<i>Tringa ochropus</i>	Ţaga (CJ)	Ajtai K. Gyula	04.05.1910	M		Charadriiformes
<i>Tringa ochropus</i>						Charadriiformes
<i>Tringa ochropus</i>						Charadriiformes
<i>Tringa ochropus</i>					adult	Charadriiformes
<i>Tringa ochropus</i>						Charadriiformes
<i>Tringa totanus</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Charadriiformes
<i>Troglodytes troglodytes</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Troglodytes troglodytes</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Troglodytes troglodytes</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1912	M		Passeriformes
<i>Troglodytes troglodytes</i>	Cluj-Napoca (CJ)	Führer Lajos	10.10.1912	M		Passeriformes
<i>Troglodytes troglodytes</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.12.1912	M		Passeriformes
<i>Troglodytes troglodytes</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Troglodytes troglodytes</i>	Cuzăplac (SJ)	Kómis Lajos	03.11.1913	M	adult	Passeriformes
<i>Troglodytes troglodytes</i>	Cuzăplac (SJ)	Kómis Lajos	20.12.1913	F		Passeriformes
<i>Troglodytes troglodytes</i>	Floreşti (CJ)	Führer Lajos	xx.01.1913	M		Passeriformes
<i>Troglodytes troglodytes</i>						Passeriformes
<i>Troglodytes troglodytes</i>						Passeriformes
<i>Turdus iliacus</i>	Făget (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes
<i>Turdus merula</i>	Cuzăplac (SJ)	Kómis Lajos	14.10.1913	M	juvenile	Passeriformes
<i>Turdus merula</i>	Viştea (CJ)	Ajtai K. Gyula	17.03.1910	M	adult	Passeriformes
<i>Turdus merula</i>				F	adult	Passeriformes
<i>Turdus merula</i>						Passeriformes
<i>Turdus merula</i>	Dumitra (AB)	Osváth Gergely	28.03.2018	M		Passeriformes
<i>Turdus migratorius</i>	California (USA)	Xántus János	xx.xx.1859	M		Passeriformes
<i>Turdus philomelos</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	M		Passeriformes

Species	Location	Name of collector	Data	Sex	Age	Order
<i>Turdus philomelos</i>	Cluj-Napoca (CJ)	Zwörner Sándor	xx.10.1903	M		Passeriformes
<i>Turdus philomelos</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1909	F		Passeriformes
<i>Turdus philomelos</i>	Micești (CJ)	Führer Lajos	xx.11.1909	M		Passeriformes
<i>Turdus philomelos</i>	Cluj-Napoca (CJ)	Vizauer Tibor Csaba	01.10.2021		juvenile	Passeriformes
<i>Turdus pilaris</i>	Căpușul Mare (CJ)		24.03.1984	M		Passeriformes
<i>Turdus pilaris</i>	Făget (CJ)		24.03.1954	F		Passeriformes
<i>Turdus pilaris</i>	Făget (CJ)		24.03.1954			Passeriformes
<i>Turdus pilaris</i>					adult	Passeriformes
<i>Turdus torquatus</i>	Ceahlău (NT)	Vincze Ferencz	09.05.1971	F		Passeriformes
<i>Turdus viscivorus</i>	Borșa (CJ)	Kómis Lajos	26.12.1913	M		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1912	M		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.10.1912	F		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Führer Lajos	xx.02.1913	F		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Zwörner Sándor	08.01.1903	F		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Führer Lajos	08.01.1913	M		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Führer Lajos	10.01.1913	F		Passeriformes
<i>Turdus viscivorus</i>	Cluj-Napoca (CJ)	Führer Lajos	05.01.1913	M		Passeriformes
<i>Turdus viscivorus</i>	Cuzăplac (SJ)	Kómis Lajos	21.12.1913	F		Passeriformes
<i>Turdus viscivorus</i>						Passeriformes
<i>Upupa epops</i>	Aghireș (CJ)	Führer Lajos	xx.09.1909	M		Bucerotiformes
<i>Upupa epops</i>	Aghireș (CJ)	Führer Lajos	xx.09.1909	F		Bucerotiformes
<i>Upupa epops</i>	Cluj-Napoca (CJ)	Ajtai K. Gyula	26.05.1910	F		Bucerotiformes
<i>Upupa epops</i>	Gilău (CJ)	Führer Lajos	xx.09.1909	F		Bucerotiformes
<i>Upupa epops</i>						Bucerotiformes
<i>Vanellus vanellus</i>	Cătina (CJ)	Zwörner Sándor	04.10.1903	M	juvenile	Charadriiformes
<i>Vanellus vanellus</i>	Hortobágy (HU)	Nagy Jenő	xx.04.1907	M	adult	Charadriiformes
<i>Vanellus vanellus</i>	Hortobágy (HU)	Nagy Jenő	xx.04.1907	F	adult	Charadriiformes
<i>Zapornia parva</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M	juvenile	Gruiformes
<i>Zapornia parva</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	F	juvenile	Gruiformes
<i>Zapornia parva</i>	Mociu (CJ)	Führer Lajos	xx.11.1909	M	juvenile	Gruiformes
<i>Zapornia parva</i>	Răscruci (CJ)	Führer Lajos	xx.10.1909	M	juvenile	Gruiformes
<i>Zapornia parva</i>	Ungaria (HU)	Führer Lajos	xx.05.1911	F	adult	Gruiformes
<i>Zapornia parva</i>	Ungaria (HU)	Führer Lajos	xx.05.1911	F	adult	Gruiformes

Collection summary

In total, we identified 925 specimens in the scientific bird skin collection housed in the Zoological Museum of Babeș-Bolyai University (Table 1; for detailed catalogue see Suppl. material 1: Table S1), belonging to 193 species from 53 families and 20 orders (Fig. 2). The orders with the most specimens were Passeriformes (487), Charadriiformes (103), Accipitriformes (77), Pelecaniformes (43), Piciformes (33), Falconiformes (28), and Gruiformes (26). Twelve orders (Anseriformes, Strigiformes, Podicipediformes, Columbiformes, Cuculiformes, Caprimulgiformes, Bucerotiformes, Ciconiiformes, Coraciiformes, Galliformes, Suliformes, Procelariiformes, and Psittaciformes) were represented by 25 or fewer specimens (Fig. 2).

The origins of 242 of 925 bird skin specimens are unknown, while three specimens were procured from different zoological gardens. 93.55% (639 out of 683) of specimens with known data were collected from Transylvania; only 43 specimens were collected outside this region, from different parts of Romania, Hungary, Ukraine, Bulgaria, Poland, and Norway (Fig. 3a, b). The collection includes eight exotic specimens:

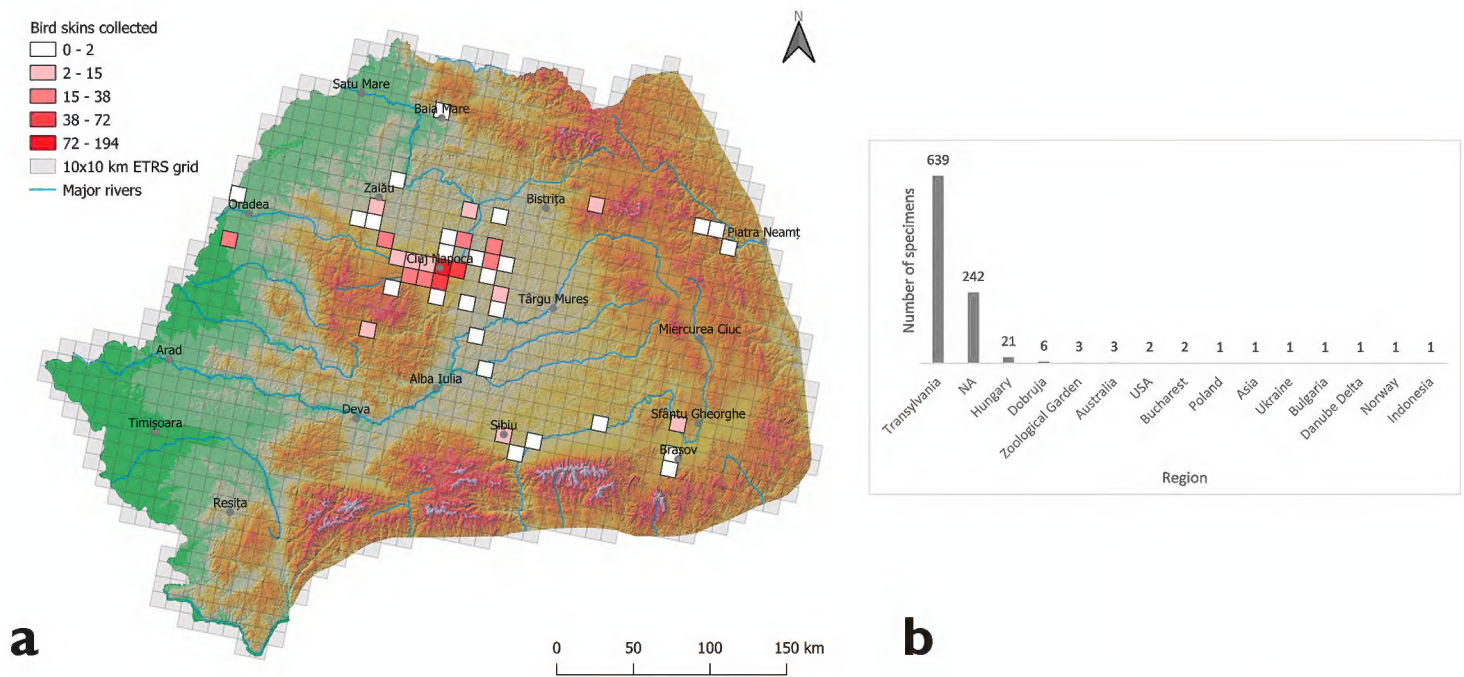


Figure 3. a The geographical distribution of the bird skin collection in the Zoological Museum of Babeş-Bolyai University with the number of bird specimens collected from each region (NA=data not available) **b** localities of birds collected in Transylvania.

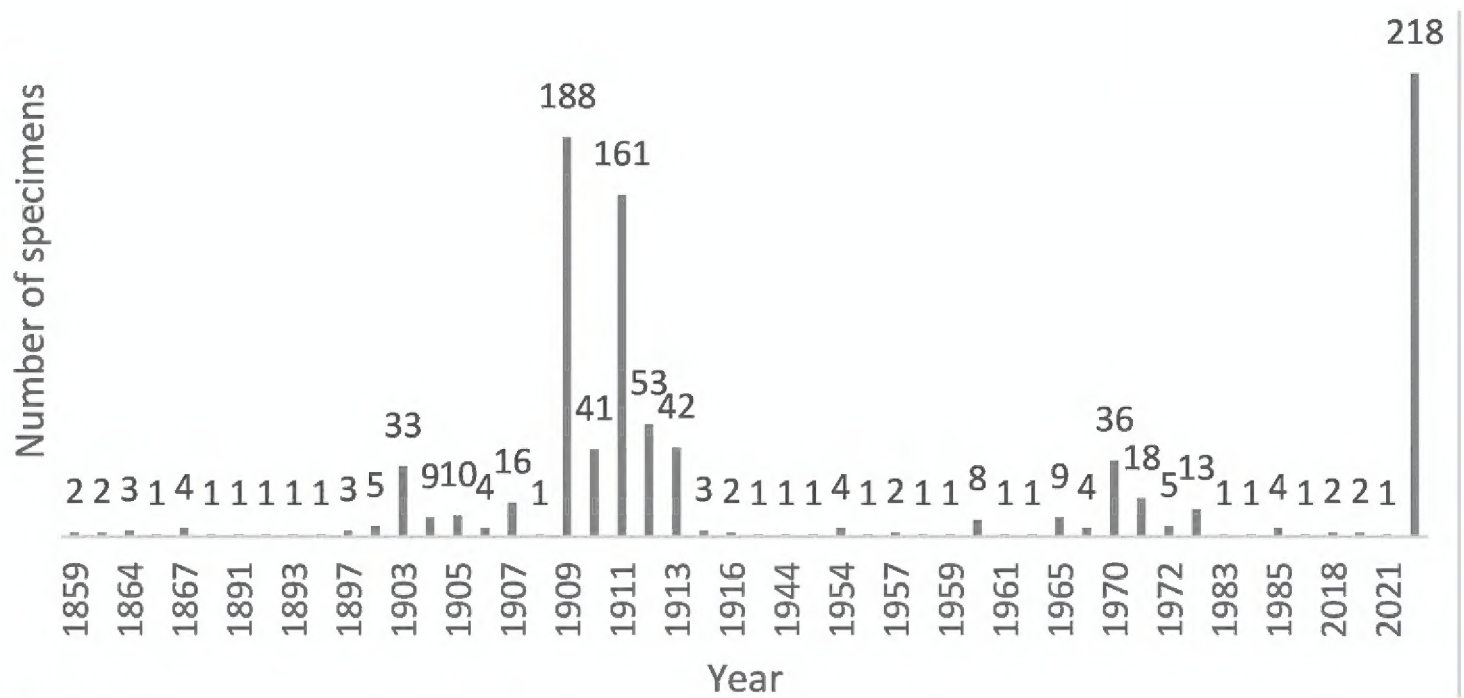


Figure 4. Temporal distribution of numbers of bird skin specimens added to the Zoological Museum of Babeş-Bolyai University Cluj-Napoca, Romania. (NA=218).

one with unknown data (*Melopsittacus undulatus*), three from Australia (*Eupsaltria australis*, *Lichenostomus fuscus*, *Pomatostomus superciliosus*), two from the USA (*Myiarchus cinerascens*, *Turdus migratorius*) one from Indonesia (*Pycnonotus cafer*), and one collected from Transylvania that is often kept as pet (*Estrilda troglodytes*) (Table 1; Suppl. material 1: Table S1).

The bird skin specimens in the collection housed in the Zoological Museum of Babeş-Bolyai University were collected between 1859 and 2021 (Fig. 4). However, we were unable to identify the year of collection/acquisition for 218 individuals. The oldest specimens were collected by János Xántus during his Californian expeditions

between 1857–1859, and donated to the museum in 1959 (Frivaldszky 1865). The oldest native species in the collection with known data were collected by Ottó Herman in 1867. Most of the specimens were collected between 1909 and 1913 by Lajos Führer (460 specimens), followed by Ferencz Vincze (72 specimens) between 1970 and 1973. In total, the bird skin collection has had 26 different contributors (Table 1; Suppl. material 1: Table S1).

The collection also includes rarities and important avifaunistic data, for example one specimen of the Cinereous Vulture *Aegypius monachus*, two specimens of the Eastern Imperial Eagle *Aquila heliaca*, and one Lesser Kestrel *Falco naumanni*, all collected between 1903 and 1907 from Transylvania (Table 1). The full catalogue of bird skin collection is provided in the Suppl. material 1: Table S1.

Acknowledgements

We are very thankful to many students from the Faculty of Biology and Geology of Babeş-Bolyai University and to the volunteers from the Zoological Museum of Babeş-Bolyai University, particularly Orsolya Kovács, Mátyás Sztojka, Helga Tóth-Pál, and Gergő Varga. We would also like to thank Cosmin-Dragomir David and Hunor Prázsmári for their help reorganizing the bird skin collection and entering the data into the primary database. We are grateful to Szilárd Daróczi from Milvus Group for his help identifying some problematic specimens. We thank the editor and reviewers for their constructive comments and valuable suggestions, which have helped improve the quality of the paper.

References

- Apáthy I (1910a) Az állattár jelentése. Az Erdélyi Múzeum-Egylet Évkönyve: 52–53.
- Apáthy I (1910b) Jelentés az állattárról. Az Erdélyi Múzeum-Egylet Évkönyve: 60–63.
- Apáthy I (1911) Az állattár jelentése. Az Erdélyi Múzeum-Egylet Évkönyve: 60–65.
- Bartoccioni F (2017) Big data in biogeography: From museum collection to citizen science. *Biogeographia* 32(1): 1–3. <https://doi.org/10.21426/B632137017>
- Causey D, Janzen DH, Peterson AT, Viegals D, Krishtalka L, Beach JH, Wiley EO (2004) Museum Collections and Taxonomy. *Science* 305(5687): 1106b–1107b. <https://doi.org/10.1126/science.305.5687.1106b>
- Filipaşcu A (1966) Păsări rare în colecţia ornitologică a Muzeului Zoologic din Cluj. *Revista Muzeelor* 3: 325–326.
- Filipaşcu A, Munteanu D, Filipaşcu S (1965) Akolozsvári „Állattani Múzeum” Madárgyűjteménye. *Vertebrata Hungarica* 7: 13–14.
- Frivaldszky J (1865) Rövid Vázlata azon szerzeményeknek, melyekkel Xántus János a m.n. Múzeum állattani osztályát gazdagította. In: Szabó J (Eds). *A magyar orvosok és természetvizsgálók 1864 Augustus 24-től - September 2-ig Maros-Vásárhelyt tartott X. nagygyűlésének történeti vázlata és munkálatai*. Pest, 268–273.

- Gotelli NJ, Booher DB, Urban MC, Ulrich W, Suarez AV, Skelly DK, Russell DJ, Rowe RJ, Rothendler M, Rios N, Rehan SM, Ni G, Moreau CS, Magurran AE, Jones FAM, Graves GR, Fiera C, Burkhardt U, Primack RB (2021) Estimating species relative abundances from museum records. *Methods in Ecology and Evolution* 2021: 1–13. <https://doi.org/10.1111/2041-210X.13705>
- Herman O (1865) Állattani közlések I. Az Erdélyi Múzeum-Egylet Évkönyve 3: 87–91.
- Herman O (1868) Állattani közlések II. Az Erdélyi Múzeum-Egylet Évkönyve 4: 48–54.
- Herman O (1869) Állattani közlemények V. Az Erdélyi Múzeum-Egylet Évkönyve 5: 92–96.
- MacLean HJ, Nielsen ME, Kingsolver JG, Buckley LB (2019) Using museum specimens to track morphological shifts through climate change. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 374(1763): e20170404. <https://doi.org/10.1098/rstb.2017.0404>
- Meineke EK, Davies TJ, Daru BH, Davis CC (2019) Biological collections for understanding biodiversity in the Anthropocene. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 374(1763): e20170386. <https://doi.org/10.1098/rstb.2017.0386>
- Mikula P, Csanády A, Hromada M (2018) A critical evaluation of the exotic bird collection of the Šariš museum in bardejov, Slovakia. *ZooKeys* 2018: 139–152. <https://doi.org/10.3897/zookeys.776.24462>
- Osváth G, Daubner T, Dyke G, Fuisz TI, Nord A, Péntes J, Vargancsik D, Vágási CI, Vincze O, Pap PL (2018) How feathered are birds? Environment predicts both the mass and density of body feathers. Portugal S (Ed.). *Functional Ecology* 32: 701–712. <https://doi.org/10.1111/1365-2435.13019>
- Osváth G, Vincze O, David D-C, Nagy LJ, Lendvai ÁZ, Nudds RL, Pap PL (2020) Morphological characterization of flight feather shafts in four bird species with different flight styles. *Biological Journal of the Linnean Society. Linnean Society of London* 131(1): 192–202. <https://doi.org/10.1093/biolinnean/blaa108>
- Pap PL, Vincze O, Wekerle B, Daubner T, Vágási CI, Nudds RL, Dyke GJ, Osváth G (2017) A phylogenetic comparative analysis reveals correlations between body feather structure and habitat. *Functional Ecology* 31(6): 1241–1251. <https://doi.org/10.1111/1365-2435.12820>
- Pap PL, Vincze O, Vágási CI, Salamon Z, Pándi A, Bálint B, Nord A, Nudds RL, Osváth G (2019) Vane macrostructure of primary feathers and its adaptations to flight in birds. *Biological Journal of the Linnean Society. Linnean Society of London* 126(2): 256–267. <https://doi.org/10.1093/biolinnean/bly189>
- Pap PL, Osváth G, Daubner T, Nord A, Vincze O (2020) Down feather morphology reflects adaptation to habitat and thermal conditions across the avian phylogeny. *Evolution* 74(10): 2365–2376. <https://doi.org/10.1111/evo.14075>
- Roselaar CS (2003) An inventory of major European bird collections. *Bull. B.O.C.* 123A: 253–337.
- Solow AR, Roberts DL (2006) Museum collections, species distributions, and rarefaction. *Diversity & Distributions* 12(4): 423–424. <https://doi.org/10.1111/j.1366-9516.2006.00259.x>
- Vágási CI, Pap PL, Vincze O, Osváth G, Erritzøe J, Møller AP (2016) Morphological Adaptations to Migration in Birds. *Evolutionary Biology* 43(1): 48–59. <https://doi.org/10.1007/s11692-015-9349-0>

Waeber PO, Gardner CJ, Lourenco WR, Wilme L (2017) On specimen killing in the era of conservation crisis - A quantitative case for modernizing taxonomy and biodiversity inventories. PLoS ONE 12(9): 1–16. <https://doi.org/10.1371/journal.pone.0183903>

Supplementary material I

The catalogue of bird skin specimens held by the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania

Authors: Gergely Osváth, Edgár Papp, Zoltán Benkő, Zsolt Kovács

Data type: xlsx. file.

Explanation note: The catalogue of bird skin specimens held by the Zoological Museum of Babeş-Bolyai University, Cluj-Napoca, Romania, including their new and old inventory numbers, updated species identification and scientific name, locality, country and region of collection, gps coordinates, name of collector, date of collection, sex and age of birds.

Copyright notice: This dataset is made available under the Open Database License (<http://opendatacommons.org/licenses/odbl/1.0/>). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.

Link: <https://doi.org/10.3897/zookeys.1102.79102.suppl1>